## REMARKS

Applicant respectfully traverses and requests reconsideration.

Claims 6-8 and 11-18 are withdrawn from consideration. Applicant wishes to thank the Examiner for the notice that claims 5, 27 and 30-32 are allowed.

Claims 1, 2, 28 and 29 stand rejected under 35 U.S.C. §102(b) as being anticipated by Chen et al. Claim 1 stands rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,535,251 (Ribas-Corbera). Claims 1, 2, 28 and 29 have been canceled without prejudice.

The new method claim 33 is supported by prior claim language and the detailed description (see e.g. FIGs. 1, 2 and description) and is believed to be allowable for reasons set froth below.

Claims 1-3, 6-8 and 11-19 and 21-24 stand rejected under 35 U.S.C. §102(b) as being anticipated by Uz et al. However, Applicant respectfully submits that claims 6-8 and 11-18 have been withdrawn. As to claim 3, Applicant respectfully requests reconsideration as the "Response to Arguments" appears to be misapprehending the claim language in view of the cited reference. Upon closer evaluation, the value $TA_i$ as noted in the cited portion of the reference namely, column 11, lines 11-50 is actually the average total activity for the frames of an entire scene. (See for example, column 11, lines 16-17). It appears that the office action equates this value $TA_i$ to the "power value" in claim 3, Applicant respectfully submits that such a comparison cannot properly be made. For example, the power value claimed in claim 3 is for "a first frame". The total activity value $TA_i$ in the cited portion refers to a plurality of frames of a scene. In addition, the claim requires adjusting a number of bits in a second frame based on the power value of the first frame. Accordingly, a power value for one frame adjusts the number of encoding bits in a second frame. This also is not taught in the portion of the cited reference. The

office action cites lines 22-37 and column 11, lines 40-50. However, again there is no power value for a single frame that causes the adjustment of the number of encoding bits in a second frame taught in the cited section. To the contrary, the total activity value $TA_i$ for an entire scene is used to control a quantization scale factor for an initial macro block in a first frame in a new scene. Accordingly, Applicant respectfully submits that this claim is in condition for allowance.

As to claim 19, the office action cites to column 11, lines 50-56 as allegedly teaching obtaining a scene change indication from a prediction error image and using the scene change indication to reset a global complexity history. In particular, the office action cites to $TA_i$ as the "global complexity history". However, in rejecting claim 3, the office action labels $TA_i$ a "power value". It appears that the office action is equating the exact same item in Uz with two different terms in Applicant's claims. Applicant respectfully submits that this appears to be improper since the total activity $TA_i$ in Uz is defined therein as the "total activity" and as such, cannot be both a global complexity history and a power value. As noted, the claim does not claim using a scene change indication to reset a power value which is what the office action alleges that the $TA_i$ corresponds to in claim 3 and elsewhere. Accordingly, the claim is in condition for allowance. In addition, the office action does not indicate what corresponds to the claimed "predication error image" in the cited portion, namely column 11, lines 50-56. Applicant is unable to find such a predication error image and as such, the claim is also in condition for this reason as well.

Claim 21 has been amended to include original claim 23. Claim 23 has been rejected based on column 11, lines 41-49. However, this portion merely indicates that when a scene change is detected, default values are established for encoding budgets wherein the budget for an I frame is twice the budget for a P frame and four times the budget for a B frame. The budget for

the I frame is determined from factors such as intraactivity in VBV occupancy. However, Applicant is unable to find any mention of causing an adjustment of sizes of non-intraframes based on expected sizes of future intraframes. If the rejection is maintained, Applicant respectfully requests a showing.

Claim 20 stands rejected under 35 U.S.C. §103 in view of Uz and Kuchibhotla and the article to Shin et al. However, the office action does not appear to apply Shin to the rejected claim. As such, Applicant will not address its nonapplicability. As to claim 20, this claim refers to obtaining a scene change indication from a prediction error image by, among other things, counting a number of intracoded pixel blocks in a predication error image, counting a second number of non-intracoded pixel blocks in a predication error image, calculating a ratio and comparing the ratio to a threshold to determine a result and using the result as the scene change indication. Uz teaches that if the deviation from an average total activity in a scene for a particular frame and the deviation from the average of the motion estimation score in a particular frame exceed the expected deviations by a threshold factor a scene change is detected. (See for example, column 11, lines 33-36). As admitted in the office action, Uz teaches a different approach from that claimed. The Kuchibhotla reference has been cited at column 2, lines 35-58 and column 3, line 53 to column 4, line 5. However, this cited portion appears to merely to teach selective coding, namely coding an input macro block I (intracoding) or coding residuals (intercoding); not the claimed operation relating to scene change indication. In addition, the motivation provided does not appear to be relevant as the alleged motivation to combine is to prevent exceeding a coding bit budget. However, the claim is directed to obtaining the scene change indication from a prediction error image. It does not appear that Kuchibhotla is directed to scene indication determination or using a prediction error image as claimed. Moreover, the

scene change determination indication provided by Uz is different from that claimed by Applicant as admitted in the office action. Accordingly, Applicant respectfully submits that the teachings do not teach what is alleged in the office action. Accordingly, this claim is also believed to be in condition for allowance.

Claim 24 stands rejected under 35 U.S.C. §103 as being unpatentable over Chiang et al.

Applicant respectfully submits that the office action admits that Chiang does not teach, among other things, a picture level rate control block operatively coupled to a prediction error image block to receive L1 distances and to produce a target quantizer step size for a pixel block, but the office action cites no other references teaching the subject matter. Instead, the office action states "It would have been obvious to one of ordinary skill in the art at the time of the invention to divide the method of Chiang into any desired subroutines (blocks) in order for the method to be run by the system of Chiang as it is well known in the art to provide a program with subroutines to perform tasks in order to easily replace or update functions in the program." Applicant respectfully submits that this motivation does not appear to be relevant to the claimed subject matter as Applicant is not claiming dividing programs into subroutines. In fact, the apparatus claimed is an apparatus for rate control for a constant-bit-rate finite-buffer-size video encoder. The office action does not provide any reference or teachings that teach what is missing from the Chiang reference. Accordingly, this claim is in condition for allowance.

Claim 25 is also believed to be allowable at least as being based on an allowable base claim.

Applicant respectfully submits that the claims are in condition for allowance and that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-

listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

Date: 2-8-06

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